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University of Namibia, Windhoek

Theme: Medicine utilisation research in Africa influencing patient care and policy

Title: Feasibility of using point prevalence surveys to assess antimicrobial utilisation in public hospitals in South Africa; a pilot study and implications

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Background: There is currently a lack of data regarding antimicrobial use among public hospitals in South Africa (SA). This is a concern given growing antimicrobial resistance rates in SA, and needs to be addressed

Objectives: Firstly, determine the appropriateness of the point prevalence survey (PPS) data collection instruments for performing antimicrobial utilisation studies among public sector hospitals in SA; secondly, determine current antimicrobial utilisation patterns in a public sector hospital in SA, and thirdly evaluate the compliance of antimicrobials prescribed with the hospital formulary, the Essential Medicines List (EML) and the current Standard Treatment Guidelines in SA. The findings to guide future quality improvement programmes in this and other public hospitals in SA if pertinent.

Methods*:* A PPS was conducted in Dr George Mukhari Academic Hospital from February to March 2017. All patient files in one single in-patient ward were completely surveyed in a single day. The number of patients who were on antimicrobials served as the numerator and the denominator comprised the total number of patients in the ward. The data was taken from patients' bed charts, which are paper-based and organized in a file, as they have all the patients' records.

Results: A total of 39 wards and 512 patient files were surveyed. The overall prevalence of antimicrobial use was 38.5%. Beta lactamase inhibitors and antimicrobials for TB were the most prevalent antimicrobials. More than two thirds (83%) of antimicrobial treatment was modified following culture sensitivity test (CST) results, and 98% of antimicrobials complied with the South African National EML. However, there is concern with the lack of IV to oral switching where appropriate.

Conclusions*:* The PPS method offers a standardized tool that can be used to identify targets for quality improvement of antimicrobial use in hospitals. However, there were concerns with the time taken to conduct PPS studies, which is an issue in resource limited situations. This is being addressed with the development of an APP alongside concerns with the lack of IV to oral switching in this hospital.